

Exhibit 6

U.S. Patent No. 8,193,792 (“’792 Patent”)

Accused Products

Dell products with Intel processors featuring Fully Integrated Voltage Regulators, including without limitation the Dell XPS 13 7390 (“Accused Products”), infringe at least Claims 1 and 10 of the ’792 Patent.

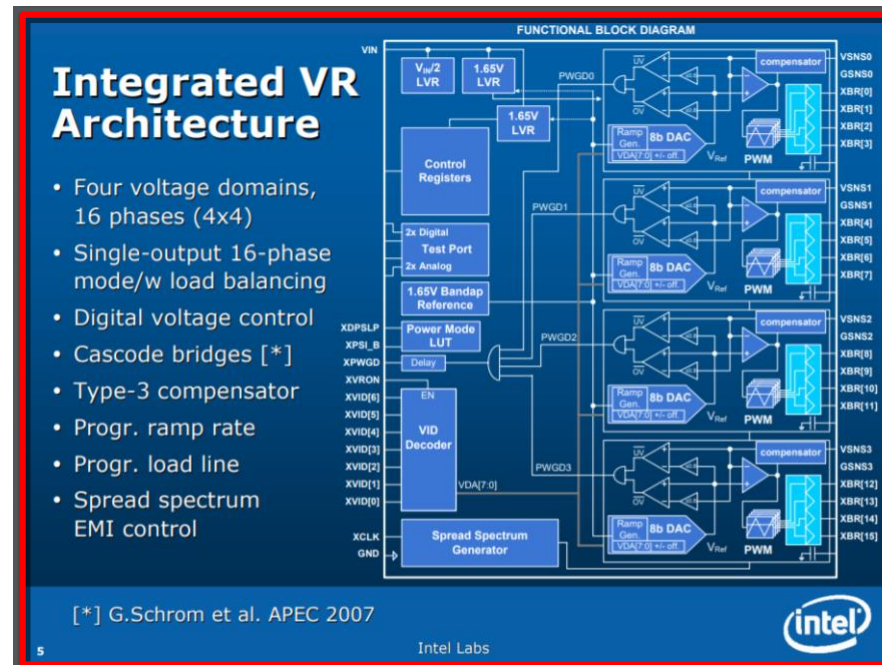
Claim 1

| Claim 1 | Accused Products |
|------------------------------|---|
| [1pre] A circuit comprising: | <p>To the extent the preamble is limiting, each Accused Product comprises the claimed circuit.</p> <p>For example, the XPS 13 7390 includes a 10th-generation Intel Core processor, which contains Intel Fully Integrated Voltage Regulator technology.</p> <p><i>See, e.g.:</i></p> <p>The most powerful 13-inch laptop in its class*: With up to new 10th Gen Intel® Quad Core processors, more cores means increased performance, even with multiple applications running. Plus, Dell Power Manager, engineered by Dell, allows users to customize their laptop acoustics (fan speeds), temperature and performance based on their preferences between quiet, ultra-performance and cool modes. For example, quiet mode is 50% quieter than the other modes. It also dynamically delivers the maximum power from your processor while monitoring and managing system temperatures. When you see the “Engineered for mobile performance” icon next to select Dell PCs, you know it was designed to keep up with your fast-paced life.</p> <p>Screenshot from https://www.dell.com/en-us/shop/dell-laptops/xps-13-7390-laptop/spd/xps-13-7390-laptop</p> |

| Claim 1 | Accused Products |
|---------|---|
| | <p data-bbox="657 280 1356 318">12.1.2 Integrated Voltage Regulator</p> <p data-bbox="825 342 1864 428">Due to the integration of platform voltage regulators into the processor, the processor has one main voltage rail (V_{CCIN}), the PCH has one main voltage rail (V_{CCIN_AUX}) and a voltage rail for the memory interface (V_{DDQ}).</p> <p data-bbox="825 428 1835 573">The voltage rail V_{CCIN} will supply the integrated voltage regulators which in turn will regulate to the appropriate voltages for the Cores, cache, System Agent, TCSS and graphics. This integration allows the processor to better control on-die voltages to optimize between performance and power savings. The V_{CCIN} rail will remain a VID-based voltage with a loadline similar to the core voltage rail in previous processors.</p> <p data-bbox="632 613 1812 716">Excerpt from 10th Gen Intel Core Processor Families Datasheet, Vol. 1, <i>available at</i> https://www.intel.com/content/dam/www/public/us/en/documents/datasheets/10th-gen-core-families-datasheet-vol-1-datasheet.pdf</p> |

Plurality of voltage regulators (FIVR)

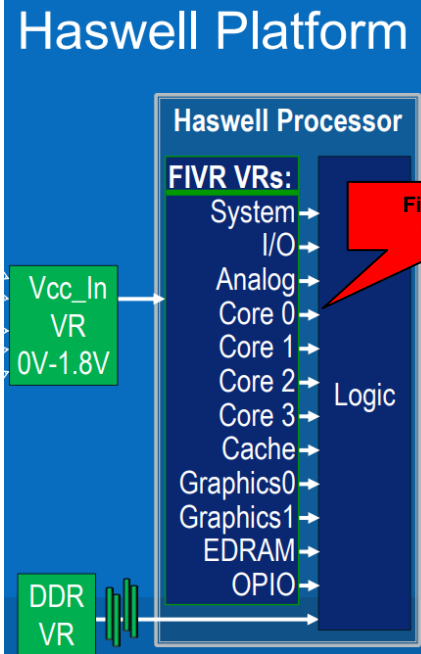
Plurality of voltage regulators (FIVR)



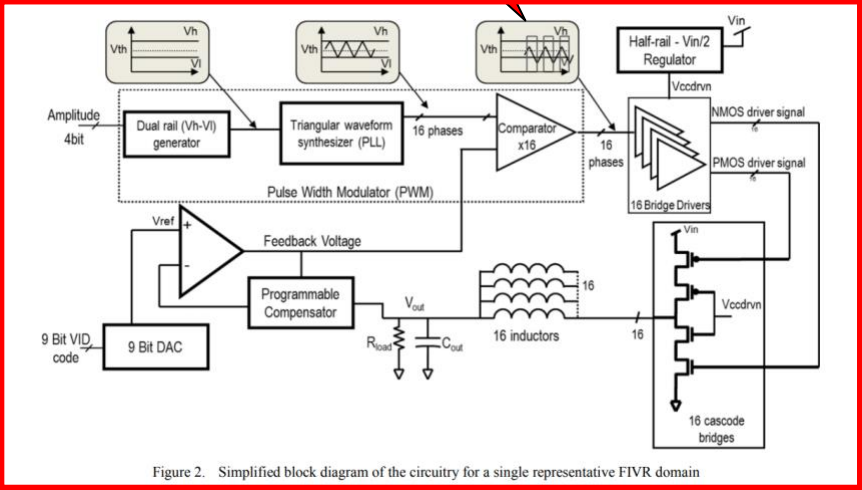
Screenshot, with annotation illustrating the plurality of voltage regulators within the Intel processor, of which one is the first voltage regulator, from <https://www.pdma.com/sites/default/files/uploads/tech-forums-packaging/presentations/is87-package-and-platform-view-intel%E2%80%99s-fully-integrated-coltage-regulator.pdf>

Claim 1

Accused Products



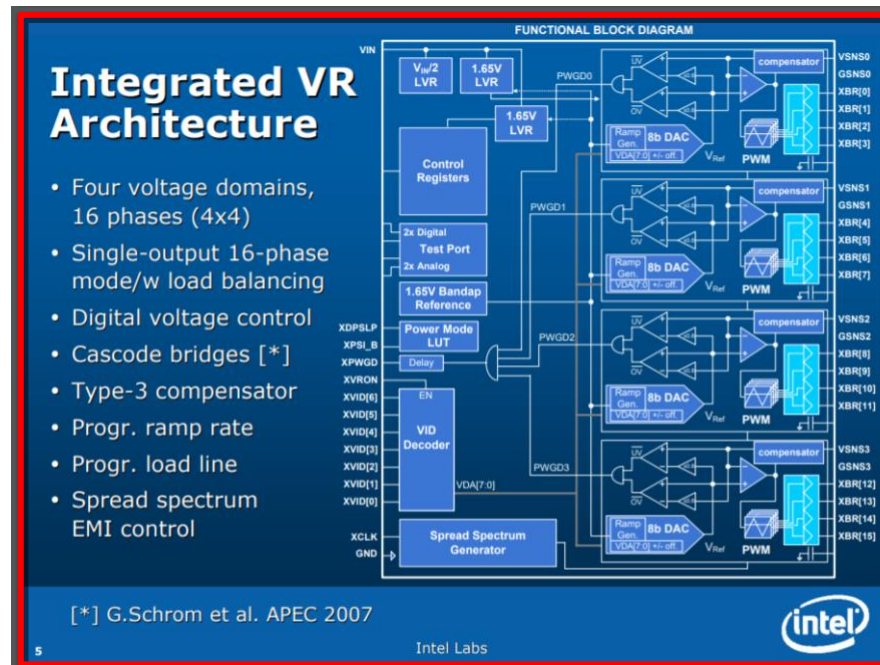
Screenshot, with annotation, from <https://www.psma.com/sites/default/files/uploads/tech-forums-packaging/presentations/is87-package-and-platform-view-intel%E2%80%99s-fully-integrated-voltage-regulator.pdf>

| Claim 1 | Accused Products |
|--------------------------------------|---|
| | <div data-bbox="915 256 1152 388" style="background-color: red; color: black; padding: 5px; text-align: center;"> FIVR circuit architecture (1st and 2nd Voltage regulator) </div>  <p data-bbox="787 925 1333 941">Figure 2. Simplified block diagram of the circuitry for a single representative FIVR domain</p> <p data-bbox="638 961 1866 1026">Screenshot, with annotation, from https://www.researchgate.net/publication/271416878_FIVR - Fully integrated voltage regulators on 4th generation IntelR Core SoCs</p> |
| [1b] a second voltage regulator; and | <p data-bbox="638 1057 1388 1089">Each Accused Product includes a second voltage regulator.</p> <p data-bbox="638 1114 1877 1256">For example, the XPS 13 7390 includes an Intel 10th-generation Core processor featuring Intel’s Fully Integrated Voltage Regulator (“FIVR”) technology, including a second voltage regulator that provides a standby voltage to the circuit section at a voltage and current level suitable for use by the processor’s memory element (“cache”) during sleep mode, as explained more fully below.</p> <p data-bbox="638 1281 751 1313"><i>See, e.g.:</i></p> |

| Claim 1 | Accused Products |
|---------|--|
| | <p data-bbox="659 280 1356 318">12.1.2 Integrated Voltage Regulator</p> <p data-bbox="827 342 1864 428">Due to the integration of platform voltage regulators into the processor, the processor has one main voltage rail (V_{CCIN}), the PCH has one main voltage rail (V_{CCIN_AUX}) and a voltage rail for the memory interface (V_{DDQ}).</p> <p data-bbox="827 428 1835 570">The voltage rail V_{CCIN} will supply the integrated voltage regulators which in turn will regulate to the appropriate voltages for the Cores, cache, System Agent, TCSS and graphics. This integration allows the processor to better control on-die voltages to optimize between performance and power savings. The V_{CCIN} rail will remain a VID-based voltage with a loadline similar to the core voltage rail in previous processors.</p> <p data-bbox="632 613 1812 716">Excerpt from 10th Gen Intel Core Processor Families Datasheet, Vol. 1, <i>available at</i> https://www.intel.com/content/dam/www/public/us/en/documents/datasheets/10th-gen-core-families-datasheet-vol-1-datasheet.pdf</p> |

Plurality of voltage regulators (FIVR)

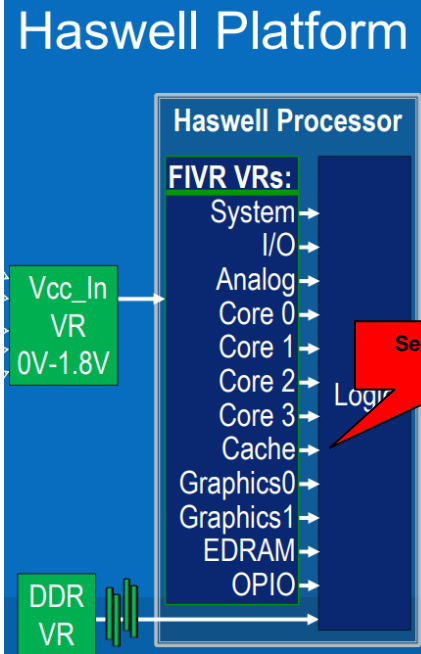
Plurality of voltage regulators (FIVR)



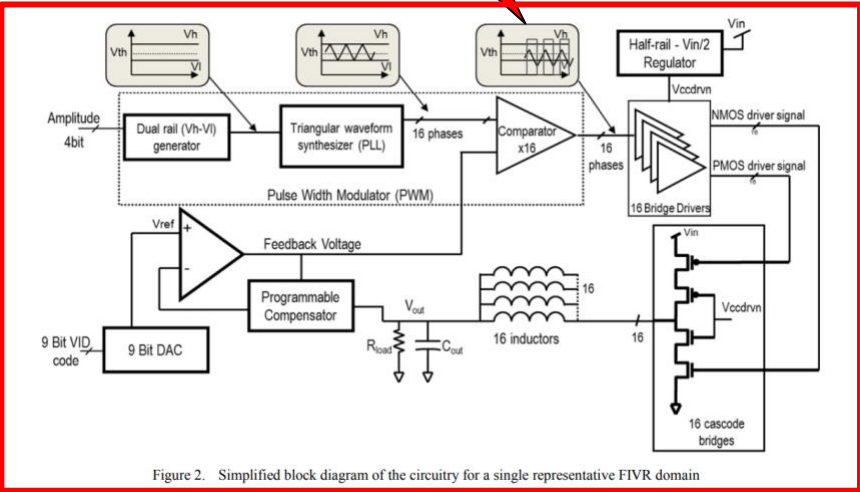
Screenshot, with annotation illustrating the plurality of voltage regulators within the Intel processor, of which one is the second voltage regulator, from <https://www.psma.com/sites/default/files/uploads/tech-forums-packaging/presentations/is87-package-and-platform-view-intel%E2%80%99s-fully-integrated-coltage-regulator.pdf>

Claim 1

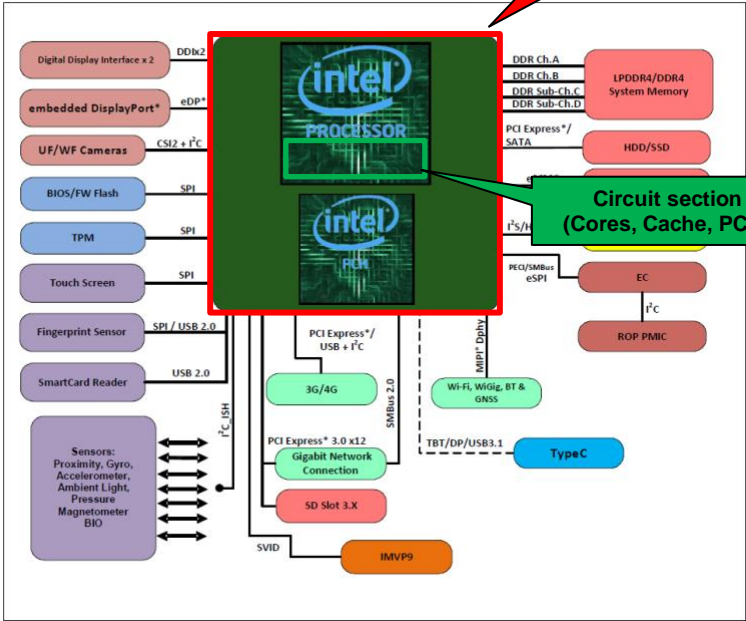
Accused Products





Screenshot, with annotation, from <https://www.pdma.com/sites/default/files/uploads/tech-forums-packaging/presentations/is87-package-and-platform-view-intel%E2%80%99s-fully-integrated-voltage-regulator.pdf>

| Claim 1 | Accused Products |
|---|---|
| | <div data-bbox="915 256 1152 388" style="background-color: red; color: black; padding: 5px; text-align: center;"> FIVR circuit architecture (1st and 2nd Voltage regulator) </div>  <p data-bbox="787 922 1333 941">Figure 2. Simplified block diagram of the circuitry for a single representative FIVR domain</p> <p data-bbox="638 959 1864 1027">Screenshot, with annotation, from https://www.researchgate.net/publication/271416878_FIVR - Fully integrated voltage regulators on 4th generation IntelR Core SoCs</p> |
| <p data-bbox="205 1057 592 1193">[1c] a circuit section, the circuit section comprising a memory element and operable to:</p> | <p data-bbox="638 1057 1892 1084">Each Accused Product includes a circuit section, the circuit section comprising a memory element.</p> <p data-bbox="638 1114 1892 1219">For example, the XPS 13 7390 includes an Intel 10th-generation Core processor featuring a Last Level Cache (“LLC”). The claimed circuit section comprises the LLC, the processor’s information processing unit (cores), and the power control unit.</p> <p data-bbox="638 1247 747 1274"><i>See, e.g.:</i></p> |

| Claim 1 | Accused Products |
|---------|--|
| | <p>2.4.1 Intel® Smart Cache Technology</p> <p>The Intel® Smart Cache Technology is a shared Last Level Cache (LLC).</p> <ul style="list-style-type: none"> • The LLC may also be referred to as a third level cache. • The LLC is shared between all IA cores as well as the Processor Graphics. • The first and second level caches are not shared between physical cores and each physical core has a separate set of caches. • The size of the LLC is SKU specific with a maximum of 2 MB per physical core and is a 16 way associative cache. <p>Excerpt from 10th Gen Intel Core Processor Families Datasheet, Vol. 1, <i>available at</i> https://www.intel.com/content/dam/www/public/us/en/documents/datasheets/10th-gen-core-families-datasheet-vol-1-datasheet.pdf</p> |

| Claim 1 | Accused Products |
|--|---|
| | <p data-bbox="1270 259 1537 305">Circuit</p> <p data-bbox="640 321 1228 344">Figure 1-1. U-Processor Line and Y-Processor Line Platforms</p>  <p data-bbox="634 977 1879 1079">Annotated screenshot showing circuit and circuit section from https://www.intel.com/content/www/us/en/products/docs/processors/core/10th-gen-core-families-datasheet-vol-1.html.</p> |
| <p data-bbox="205 1112 604 1214">[1d] receive a supply voltage from the first voltage regulator when in an operating mode;</p> | <p data-bbox="634 1112 1879 1177">In each Accused Product, the circuit section is operable to receive a supply voltage from the first voltage regulator when in an operating mode.</p> <p data-bbox="634 1205 1879 1307">For example, the XPS 13 7390 receives a certain core voltage from the first voltage regulator while in an operating mode, such as a C0 state (“The normal operating state of a processor IA core where code is being executed”).</p> <p data-bbox="634 1334 745 1367"><i>See, e.g.:</i></p> |

| Claim 1 | Accused Products | | | | | | |
|--------------|---|--|-----------------------------|-------------|----|-----|--|
| | <div><div>operating mode</div><div><p>Table 3-4. Core C-states</p><table><tr><th>Core C-State</th><th>C-State Request Instruction</th><th>Description</th></tr><tr><td>C0</td><td>N/A</td><td>The normal operating state of a processor IA core where code is being executed</td></tr></table><p>Excerpt from 10th Gen Intel Core Processor Families Datasheet, Vol. 1, <i>available at</i> https://www.intel.com/content/dam/www/public/us/en/documents/datasheets/10th-gen-core-families-datasheet-vol-1-datasheet.pdf</p></div></div> | Core C-State | C-State Request Instruction | Description | C0 | N/A | The normal operating state of a processor IA core where code is being executed |
| Core C-State | C-State Request Instruction | Description | | | | | |
| C0 | N/A | The normal operating state of a processor IA core where code is being executed | | | | | |

| Claim 1 | Accused Products |
|--|--|
| | <p>Software Impact to Platform Energy</p> <p>Operating mode (first voltage regulator on)</p>  <p>Figure 4: Flexible C-state Select Idle Power Level vs. Responsiveness</p>  <p>Annotated screenshot from https://www.intel.ru/content/dam/doc/white-paper/energy-efficient-platforms-2011-white-paper.pdf</p> |
| <p>[1e] transition from the operating mode to a sleep mode, the transition comprising deactivation of inputs of the circuit section; and</p> | <p>In each Accused Product, the circuit section is operable to transition from the operating mode to a sleep mode, the transition comprising deactivation of inputs of the circuit section.</p> <p>For example, the Intel processor in the XPS 13 7390 can transition into a sleep mode, such as the C6 state, in which the information processor units flush their L1 instruction/data caches and L2 caches, save their architectural state, deactivate their inputs, and deactivate the first voltage regulator.</p> |

Claim 1

Accused Products

See, e.g.:

Table 3-4. Core C-states

| Core C-State | C-State Request Instruction | Description |
|--------------|---|--|
| C0 | N/A | The normal executed |
| C1 | MWAIT(C1) | AutoHalt - Core execution stopped, waiting for package in C0 state |
| C1E | MWAIT(C1E) | Core C1 + lowest frequency and voltage state |
| C6-C10 | MWAIT(C6/7/7s/ C8/9/10) or IO read=P_LVL3/4/5/6/7/8 | Processor IA, flush their L1 instruction cache, L1 data cache, and L2 cache to the LLC shared cache cores save their architectural state to a SRAM before reducing IA cores voltage, if possible may also be reduced to 0V. Core clocks are off. |

Sleep mode

deactivation of inputs

Excerpt from 10th Gen Intel Core Processor Families Datasheet, Vol. 1, available at <https://www.intel.com/content/dam/www/public/us/en/documents/datasheets/10th-gen-core-families-datasheet-vol-1-datasheet.pdf>

Software Impact to Platform En


Sleep mode
(Core IVR off)

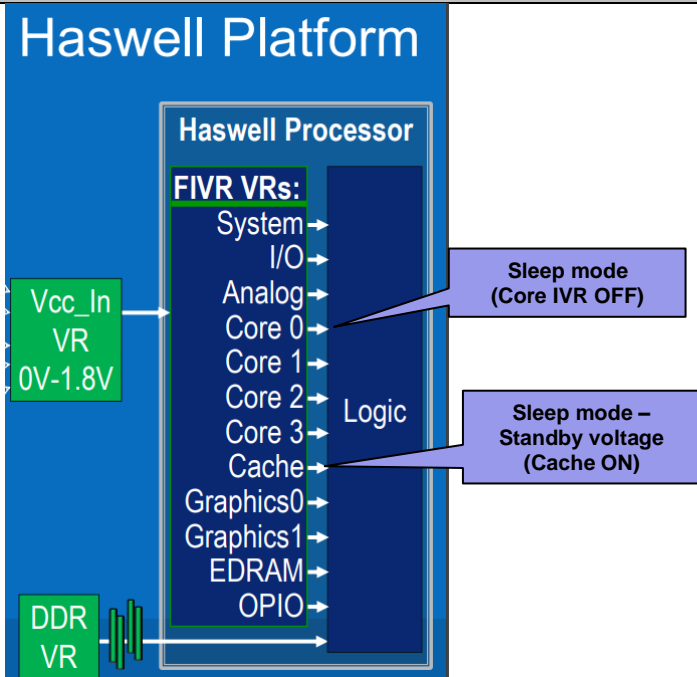


Figure 4: Flexible C-states to select Idle Level vs. Responsiveness



Illustrated screenshot from <https://www.intel.ru/content/dam/doc/white-paper/energy-efficient-platforms-2011-white-paper.pdf>

| Claim 1 | Accused Products | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--------------|--------|-------|----------------|--------|----------------|-----|---------------|------|------|------|-----|-----|-----|------------|----|-----|-----|-----|-----|-----|-----|----|----|-----|-----|-----|-----|--------------|----|----|----|----|----|----|--------------|----|----|----|----|----|----|--------------|--------|------|------|------|------|------|-------------|------|--------|--------|-----|-----|--------|--------------------|--------|-----|-----|-----|-----|------|
| [1f] receive a standby voltage from the second voltage regulator when in the sleep mode, the standby voltage being less than the supply voltage and sufficient to preserve an information item stored in the memory element. | <p>In each Accused Product, the circuit section is operable to receive a standby voltage from the second voltage regulator when in the sleep mode, the standby voltage being less than the supply voltage and sufficient to preserve an information item stored in the memory element.</p> <p>For example, the Intel processor in the XPS 13 7390 continues to operate the integrated voltage regulator associated with the Last Level Cache during sleep mode (such as the C6 core state) in order to receive a lower voltage sufficient to preserve the contents of the LLC memory.</p> <p>See, e.g.</p> <div><p>Software Impact to Platform Energy-Efficiency</p><p>Figure 4: Flexible C-states to meet Power Level vs. Responsiveness</p><table><tr><th>Active state</th><th>C0</th><th>C1</th><th>C3</th><th>C6/C7</th><th>PC7 Transition</th><th>PC7</th></tr><tr><td>Core voltage*</td><td>High</td><td>High</td><td>High</td><td>Low</td><td>Low</td><td>Low</td></tr><tr><td>Core clock</td><td>On</td><td>off</td><td>off</td><td>off</td><td>off</td><td>off</td></tr><tr><td>PLL</td><td>On</td><td>On</td><td>off</td><td>off</td><td>off</td><td>off</td></tr><tr><td>L1/L2 caches</td><td>On</td><td>On</td><td>On</td><td>On</td><td>On</td><td>On</td></tr><tr><td>LLC/L3 cache</td><td>On</td><td>On</td><td>On</td><td>On</td><td>On</td><td>On</td></tr><tr><td>Wakeup time*</td><td>Active</td><td>Fast</td><td>Fast</td><td>Fast</td><td>Fast</td><td>Slow</td></tr><tr><td>Idle power*</td><td>High</td><td>Medium</td><td>Medium</td><td>Low</td><td>Low</td><td>Lowest</td></tr><tr><td>Transition energy*</td><td>Active</td><td>Low</td><td>Low</td><td>Low</td><td>Low</td><td>High</td></tr></table><p>* Rough approximation</p><p>Package Power Reduction →</p><p>Core receives supply voltage during operating mode</p><p>LLC receives lower voltage from its IVR during sleep</p></div> | Active state | C0 | C1 | C3 | C6/C7 | PC7 Transition | PC7 | Core voltage* | High | High | High | Low | Low | Low | Core clock | On | off | off | off | off | off | PLL | On | On | off | off | off | off | L1/L2 caches | On | On | On | On | On | On | LLC/L3 cache | On | On | On | On | On | On | Wakeup time* | Active | Fast | Fast | Fast | Fast | Slow | Idle power* | High | Medium | Medium | Low | Low | Lowest | Transition energy* | Active | Low | Low | Low | Low | High |
| Active state | C0 | C1 | C3 | C6/C7 | PC7 Transition | PC7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Core voltage* | High | High | High | Low | Low | Low | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Core clock | On | off | off | off | off | off | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PLL | On | On | off | off | off | off | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1/L2 caches | On | On | On | On | On | On | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LLC/L3 cache | On | On | On | On | On | On | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wakeup time* | Active | Fast | Fast | Fast | Fast | Slow | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Idle power* | High | Medium | Medium | Low | Low | Lowest | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Transition energy* | Active | Low | Low | Low | Low | High | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <p>Illustrated screenshot from https://www.intel.ru/content/dam/doc/white-paper/energy-efficient-platforms-2011-white-paper.pdf</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Claim 1 | Accused Products |
|---------|--|
| |  <p>The diagram illustrates the Haswell Platform architecture. A central 'Haswell Processor' block contains several components: 'FIVR VRs' (highlighted in green), 'System I/O', 'Analog', 'Core 0', 'Core 1', 'Core 2', 'Core 3', 'Cache', 'Graphics0', 'Graphics1', 'EDRAM', and 'OPIO'. A 'Vcc_In VR' (0V-1.8V) is connected to the 'System I/O' and 'Analog' sections. A 'DDR VR' is connected to the 'EDRAM' section. Two callout boxes provide additional context: 'Sleep mode (Core IVR OFF)' points to the 'Core 0' through 'Core 3' section, and 'Sleep mode – Standby voltage (Cache ON)' points to the 'Cache' section. The entire processor block is labeled 'Logic'.</p> <p>Illustrated screenshot from https://www.pdma.com/sites/default/files/uploads/tech-forums-packaging/presentations/is87-package-and-platform-view-intel%E2%80%99s-fully-integrated-coltage-regulator.pdf</p> |

Claim 10

| Claim 10 | Accused Products |
|--|---|
| [10pre] A method comprising: | To the extent the preamble is limiting, each Accused Product performs the claimed method. <i>See supra</i> claim element [1pre]. |
| [10a] delivering to a circuit section of a circuit a supply voltage from a first voltage | Each Accused Product performs delivering to a circuit section of a circuit a supply voltage from a first voltage regulator when in an operating mode. |

| Claim 10 | Accused Products |
|---|---|
| regulator when in an operating mode; | <i>See supra</i> claim element [1d]. |
| [10b] transitioning from the operating mode to a sleep mode, the transition comprising deactivation of inputs of the circuit section; and | Each Accused Product performs transitioning from the operating mode to a sleep mode, the transition comprising deactivation of inputs of the circuit section. <i>See supra</i> claim element [1e]. |
| [10c] delivering to the circuit section a standby voltage from a second voltage regulator when in the sleep mode, the standby voltage being less than the supply voltage and sufficient to preserve an information item stored in a memory element. | Each Accused Product performs delivering to the circuit section a standby voltage from a second voltage regulator when in the sleep mode, the standby voltage being less than the supply voltage and sufficient to preserve an information item stored in a memory element. <i>See supra</i> claim element [1f]. |